

Remarks

By this Amendment, the specification and claims 1 and 21 are amended, and new claims 24 and 25 are added. After entry of this Amendment, claims 1-4, 6-21, 24 and 25 will be pending. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Interview

Applicants appreciate the courtesies extended by Examiner Mayekar to applicants' representative during the telephone interview of November 17, 2003. During the interview, the amendments to the specification, an argument in response to the combination of the primary and secondary references, and a change to the term "exposed" in claim 1, were discussed. The substance of the interview is summarized in the following remarks.

Specification Amendments

As discussed during the interview, the specification is amended:

- at page 7 to provide the application number of the prior patent application
- at page 6 to reorder the third full paragraph, clarifying that power is supplied from the source to the fan 28, to the ballast 88 (connected to the fluorescent bulb 90) and to the power supply 86 (which provides power to the negative ion generator 32)
- at page 8 to correct a minor informality, to clarify the relationship between the production of ozone vs. the production of peroxide radicals and super oxide ions, and to clarify the relationship between the surface area of the rings and their spacing.

No new matter has been added.

Amendment to Claim 1

Claim 1 is amended to recite "a negative ion generator positioned within the housing, the negative ion generator having an enclosed charged surface and an opposite outer surface"

The amendment to claim 1 is believed to obviate the 35 USC § 112, rejections raised over the original claim 1 recitation of "an opposite *exposed* surface." Although applicants maintain that the original claim 1 recitation sufficiently defines the surface that is opposite to the charged surface, applicants have amended claim 1 as agreed upon with the examiner to reduce costs

associated with prosecution of this application. The amendment to claim 1 does not narrow its literal scope.

Amendment to Claim 21

Claim 21 is amended to recite that the photo-ionizing assembly and the negative ion generator are powered by a common power source.

New Claims 24 and 25

Claims 24 and 25 are added to provide an alternative claimings. No new matter has been added.

Rejoinder of Groups I and III

Applicants appreciate that the claims of Groups I and III (claims 1-4 and 6-21) will be rejoined and examined together in this application.

Allowable Subject Matter

Applicants appreciate the indication of allowable subject matter in claims 13 and 14.

Prior Art Rejections

A. § 103(a) Rejections of Claims 1-4, 6-11, 20 and 21

Claims 1-4, 6-11, 20 and 21 are rejected under 35 USC § 103(a) over U.S. Patent No. 6,508,982 to Shoji (Shoji) in view of U.S. Patent No. 4,918,568 to Stone (Stone '568) et al. This rejection is respectfully traversed.

Claim 1 is directed to a multi-functional air treatment apparatus. Claim 1 recites a generally enclosed housing, a negative ion generator positioned within the housing and a photo-ionizing assembly positioned within the housing. The negative ion generator has an enclosed charged surface and an opposite exposed or outer surface on which negative ions are generated and from which the negative ions are transferred to the air via a negative electrostatic field. The negative ions generated by the negative ion generator interact with and neutralize positively charged particles in air. Light from the photo-ionizing assembly causes oxidization of at least some of the airborne matter and adjacent air.

Independent claim 21 also recites a negative ion generator with an enclosed conductive inner surface.

The Office action asserts that one of ordinary skill in the art would have been motivated to combine the teachings of Stone with Shoji to achieve the features of claim 1 and claim 21. Applicants respectfully disagree.

As discussed during the interview, electrons are generated by corona discharge in the Shoji apparatus. Such a corona discharge system involves high voltage applied between two spaced apart electrodes. As a result, such a system can pose safety concerns to users who might come into contact with one of the highly charged surfaces. Further, operation of a corona discharge system usually produces ozone. See, e.g., column 1, lines 51-54, which state "the present invention provides an apparatus

Stone, however, *teaches away from* the production any ozone:

It is preferred that there be no high voltage conductive material with which the air comes into contact. It therefore is not possible for particulate matter in the air to deposit on such a conductive material to form points or high spots that could lead arcing and ozone generation. The deleterious effects of ozone on human beings are well recognized, as are the color bleaching and deterioration of fabric and other materials with which the ozone comes in contact.

Column 9, lines 5-13.

As noted by the Federal Circuit, it is improper to combine references where the references teach away from their combination. In re Grasselli, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983) (the claimed catalyst which contained both iron and an alkali metal was not suggested by the combination of a reference which taught the interchangeability of antimony and alkali metal with the same beneficial result, combined with a reference expressly excluding antimony from, and adding iron to, a catalyst). Also, each prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

Because the Shoji apparatus specifically aims to produce ozone through use of the corona discharge element, whereas Stone teaches against producing ozone, there would have been no motivation for one of ordinary skill in the art to incorporate the Stone structure in Shoji.

Therefore, the rejection based on the combination of Shoji and Stone is in error and should be withdrawn.

Independent claims 1 and 21 would not have been obvious in view of the applied references. Dependent claims 2-4, 6-11, and 20 are allowable for at least the same reasons as claim 1, as well as for their respective additional features.

B. § 103(a) Rejections of Claim 12

Claim 12 is rejected under 35 USC § 103(a) over Shoji in view of Stone, and further in view of U.S. Patent 6,464,868 to Korin (Korin). This rejection is respectfully traversed.

Claim 12 depends from claim 1. Korin does not provide for the deficiencies in the combination of Shoji in view of Stone noted above, namely that Stone teaches against use of ozone and thus is not combinable with Shoji's ozone-generating apparatus.

Therefore, claim 12 would not have been obvious in view of the applied combination of references. Withdrawal of the rejection is requested.

C. § 103(a) Rejections of Claims 15-19

Claim 15-19 are rejected under 35 USC § 103(a) over Shoji in view of Stone, and further in view of U.S. Patent 5,707,594 to Austin (Austin). This rejection is respectfully traversed.

Claim 15-19 depends from claim 1. Korin does not provide for the deficiencies in the combination of Shoji in view of Stone noted above, namely that Stone teaches against use of ozone and thus is not combinable with Shoji's ozone-generating apparatus.

Therefore, claims 15-19 would not have been obvious in view of the applied combination of references. Withdrawal of the rejection is requested.

Information Disclosure Statement

The Office action asserts that the Information Disclosure Statement (IDS) filed December 6, 2001, fails to comply with 37 CFR 1.98(a)(1), which requires "a list of all patents, publications, or other information submitted for consider by the Office." For this reason, the Office action indicates that the information identified in the IDS has not been considered.

Applicants respectfully disagree and suggest that a suitable Form PTO 1449 identifying the references was filed with the IDS, and that the PTO must have received it. Therefore, the identified references should be considered.

Applicants filed the Form PTO 1449 identifying the references together with the IDS on December 6, 2001. For the Examiner's convenience, a duplicate copy of the Form PTO 1449 is attached. Also attached are copies of the transmittal letter and postcard receipt, each of which indicates that a Form PTO 1449 was enclosed.

The Office action refers to U.S. Patent No. 4,918,568 to Stone, but does not note this patent on the PTO Form 892. The Office action at page 5 states "STONE a reference cited by Applicant . . . ," which would appear to indicate that the Examiner had received a copy of applicants' Form PTO 1449. This is true because the Form PTO 1449 is the only place in the IDS where the Stone patent is specifically identified.

Accordingly, applicants request consideration of the IDS and to have it accorded its stated filing date of December 6, 2001, i.e., filed before the mailing of a first Office action on the merits.


Conclusion

Based on the foregoing, applicants respectfully submit that the claims are drawn to allowable subject matter and that the application is in condition for allowance. Should the Examiner believe that anything is necessary to place the application in better condition for allowance, the examiner is requested to contact applicants' representative by telephone.

Respectfully submitted,

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